

# Second Wind Air Purifier

Models:

2018

2000

2181

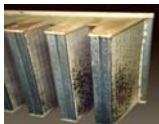
2000-230

## Ultraviolet Germicidal Units for Heating Ventilation and Air Conditioning Systems

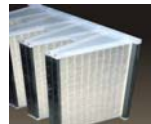


Since the first ultraviolet irradiation system was used successfully in 1909, ultraviolet irradiation has had a 94 year performance history. Second Wind uses the ultraviolet wavelength at 253.7nm, ultraviolet radiation lethal to microorganisms. Second wind air purifiers can reduce mold, bacterial, or viral airborne microbes in all areas of a Heating Ventilation and Air Conditioning system (HVAC).

Return Before



Return After



Second Wind air purifiers can also address Volatile Organic Compounds (VOC's), through the addition of Photo-Catalytic Oxidation (PCO). PCO in this case is achieved by the use of our high intensity ultraviolet lamps irradiating the surface of grade 2 titanium creating electron hole pairs (hydroxyl radicals OH). Gas contaminates are oxidized in a reaction that takes place with the hydroxyl radicals, changing the contaminates molecular structure.

The Second Wind Purifier is the perfect choice for small or large applications. Second Wind uses ultraviolet germicidal light and a patented photo-catalytic process to disinfect mold, bacteria, infectious disease, and decrease volatile organic compounds in the air stream. Second Wind air purifiers are designed for surface and air disinfection.

### ***Features and Benefits***

- Available for all applications
- Disinfects mold
- Inexpensive to operate
- Surface and Air Indoor Air Quality Control
- Proven effectiveness through independent test data
- High intensity Ultraviolet Lamps
- Patented Photo-Catalytic Oxidation process to reduce VOC levels
- Ti2 photo-catalytic surface area
- Limited Lifetime Unit Warranty
- 5 year ballast warranty
- 1 year lamp warranty
- Over 9000 hours lamp expectancy
- Electronic start power supply ranges from 110/277 VAC (models 2000-230 & 2181)
- Registered as a Class II medical device #k980745
- Registered with the EPA #73112

# SPECIFICATIONS

Second Wind Air Purification 2000, 2018, 2181, and 2000-230 units are mounted in the return to accommodate most HVAC systems. The units install anywhere in the system to disinfect molds, bacteria or reduce VOC contamination. The housing is steel and comes in 2 sizes (9" and 18" probes). All units are manufacturer assembled and tested.

## **Models 2181 and 2000-230:**

The power source is a electronic, Class P, Sound rated A, Type HL, NO PCB's, type 1 outdoor ballast meeting EMI requirements of CFR Title 47 Part 18 consumer. The operating range is from 120 VAC to 277 VAC and the current is 800ma@120vac. The ballast is designed to operate at any airflow and relative humidity.

## **Models 2018 and 2000:**

The power source is a electronic, Class P, Sound rated A, Type HL, NO PCB's, type 1 outdoor ballast meeting EMI requirements of CFR Title 47 Part 18 consumer. The operating range is 120 VAC and the current is 800ma@120vac. The ballast is designed to operate at any airflow and relative humidity.

Second Wind lamps operate at 253.7 nm, ideal for air disinfection, good for use at any velocities, temperatures ranging from 30 - 170 F. Every lamp has an extended lamp life coating which helps maintain intensity levels at 85% even after a year of operation. They are a High Output (HO), T5 (15mm) diameter, lamp yielding 2/3 more output than standard lamps of the same length. Base of the type "L" quartz glass is ceramic, with triple-coiled electrodes made of molybdenum lead in a clamped filament design. Lamp connectors are 4-pin single ended circling sockets. Lamp life shall not be less than 9000 hours.

*Submitted device shall be tested under typical HVAC conditions and in accordance with the general provisions of IES Lighting Handbook, 1981 applications Volume. Total output per one inch arc length shall be not less than 10uW/cm2 at 1 meter in air of 45 F and 400 fpm*

The titanium strips attached to the units are the catalyst for the production of hydroxyl radicals in the Photocatalytic process. They are made of Titanium grade 2; 0.01% C, 0.005% N, 0.04% Fe, 0.12% O, and balance Titanium. It has a density of 4.5 g/cm cube, specific heat of 520 J/kg K, electrical resistivity 50 micro ohms cm, thermal expansion (10-6K) 9.1 (20-300C), tensile strength 390 N/mm sq, and elongation A3 min 30%.

## **Dimensions:**

2181 - 6"W x 8.5"L x 2.25" H x 2-9" Probes  
2000 - 6"W x 8.5"L x 2.25" H x 2-18" Probes  
2000-230 - 6"W x 8.5"L x 2.25" H x 2-18" Probes  
2018 - 6"W x 8.5"L x 2.25" H x 1-18" Probe

## **Weight**

2181 - 10 lbs.  
2000 - 10 lbs.  
2000-230 - 10 lbs  
2018 - 8 lbs.

## **Power Electronic Ballast**

**2181 and 2000-230:** 120 VAC - 277 VAC

**2018 and 2000:** 120 VAC

## **Lamps**

	<b>18"</b>	<b>9"</b>
Base Face in. -	17.2	8.4
Length mm -	436.0	212.0
Arc Length in.-	14.2	5.2
mm -	360	131
Current mA-	800	800
Wattage W-	40	25
Voltage @60Hz-	86	32
UV Output W-	10	5
UV Output @1M uW/cm2 -	500	360
Lamp life hours-	9000	9000

## **Wiring**

Number 18 teflon coated wire 600V, 105C.

## **URV Rating**

Done at 400 fpm, 6" installation tracks, with TB Bacilli rate constant with 60% reduction. Based on scale like MERV rating Low- High, 1-15.

<b>18"</b>	<b>9"</b>
<b>13</b>	<b>12</b>

## **Warranty**

**Limited Lifetime- Fixture**

**1-Year Lamps**

**5-Year Ballast**

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